

4- The improvement provided by the present invention enables simultaneous analysis of a plurality of target entities (page 5; para 0065 and para 0071). Claim 6 has been amended accordingly.

5- As shown in Example 1 (page 6; para 0078), the present invention is not limited to at least three different entities, but includes a single specific target entity (page 5; para 0070) or a plurality of specific target entities (page 5; para 0071). Claim 6 has been amended to clarify this point.

Claim Rejection under 35 USC § 102

3. Claims 1-11 are rejected under 35 U.S.C. 102 (b) as being anticipated by Kausch et al. (US 5,665,582).

Applicant respectfully suggests that the present invention contains physical features, not appreciated by Kausch et al. Magnetic particle composition and size are critical features in the enrichment, isolation and analysis of specific target entities present at low concentrations of the present invention (page 4, para 0044). The albumin coated magnetite core provides very low non-specific surface binding of non-target entities in blood. Also, these particles provide for shorter incubation times (5 minutes). This provides for complete and efficient mixing with substantially no non-specific binding on non-target entities and allows for reduced collection times of specific targets (see Example 4, para 0108). Further, assay optimization for specific target detection requires even further modulation of the magnetic particles over conventional magnetic particles (page 2, para 0015). For example, alteration of the binding characteristics of the microparticles is needed to compensate for variations in epitope densities on the target entities which vary among target entities. Kausch et al. would have to understand that these characteristics are essential for either permitting simultaneous enrichment and measurement of multiple specific target entities without non-specific interference and/or magnetic enrichment at very low concentrations in a sample (page 2, para 0019). The use of this type of

paramagnetic particle was not recognized by the prior art, and would not be an obvious extension of the Kausch invention.

Claim 1 has been amended to incorporate this feature.

Claims 6-11 depend upon the composition of claim 1. These claims have been amended for the same reasons described above.

4. Claims 15-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Liberti et al. (US 6,013,532).

Applicant respectfully suggests that the present invention contains physical features, also not appreciated by Liberti et al. (US 6,013,532). In the present invention, the composition used for the calibration of diagnostic instruments requires the coated beads to be stable (page 7; para 0108). The amino groups on the outer surface of the coated magnetic particles are crosslinked with paraformaldehyde to improve stability. Further, these crosslinked particles now have free aldehyde groups on their surface for attaching additional protein layers or quenching with a substance containing amino groups to minimize bead aggregation. Liberti et al. only appreciated a molecule covalently attached to the magnetic core whereby the stabilizing effect is only upon the colloidal properties themselves, i.e. avoiding the mutual attraction of the particles in the presence of a magnetic field and thus maintaining a colloidal suspension (Liberti et al. col 6; lines 9-19.)

Claims 15-17 have been amended to reflect this difference.